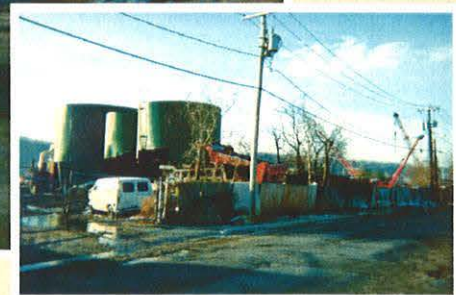
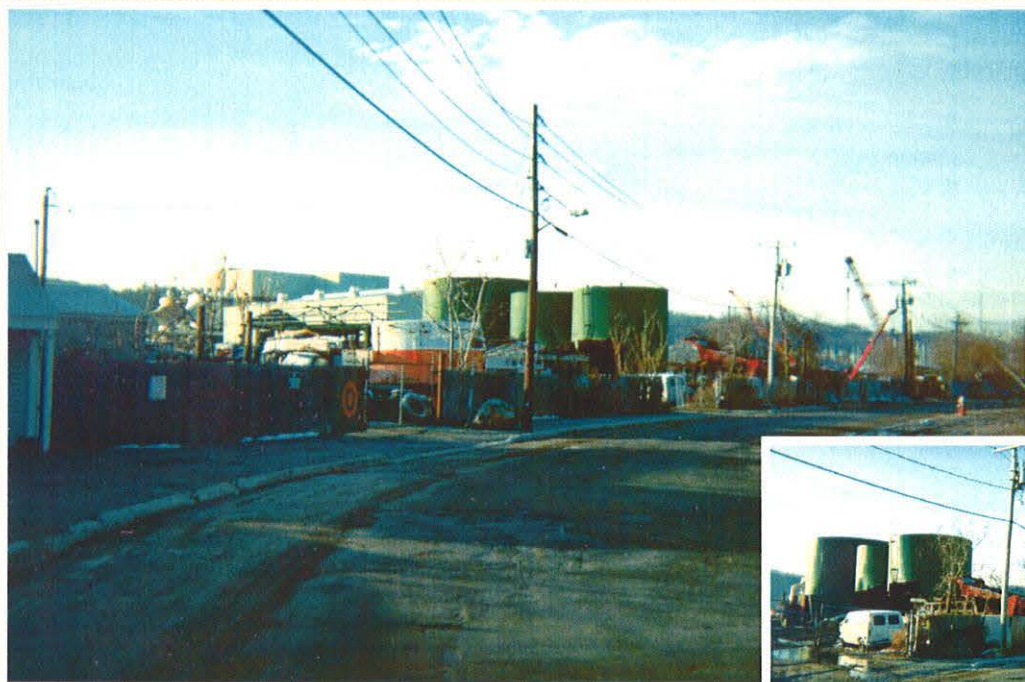


Sampling, Analysis and Monitoring Plan



Doxey's Property
10 Garvies Point Road, Glen Cove, New York

Prepared For
The City of Glen Cove
Glen Cove, New York



Dvirka and Bartilucci

CONSULTING ENGINEERS

A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

SAMPLING, ANALYSIS AND MONITORING PLAN

**DOXEY'S PROPERTY
10 GARVIES POINT ROAD
GLEN COVE, NEW YORK**

PREPARED FOR

**CITY OF GLEN COVE
COMMUNITY DEVELOPMENT AGENCY**

BY

**DVIRKA AND BARTILUCCI CONSULTING ENGINEERS
WOODBURY, NEW YORK**

JUNE 1999

**SAMPLING, ANALYSIS AND MONITORING PLAN
DOXEY'S PROPERTY
10 GARVIES POINT ROAD
GLEN COVE, NEW YORK**

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1.0 INTRODUCTION

1.1 Project Background

The City of Glen Cove Community Development Agency (CDA) retained Dvirka and Bartilucci Consulting Engineers (D&B) to conduct a Phase I Environmental Site Assessment (ESA) of the Doxey's Property (property/site) located at 10 Garvies Point Road, Glen Cove, New York. This work was performed under the City of Glen Cove's Brownfield Program for redevelopment of industrial and potentially contaminated properties, and as part of the Glen Cove Creek Revitalization Plan.

The Phase I ESA identified several areas of potential environmental concern at the property. This document presents a Sampling, Analysis and Monitoring Plan (SAMP) to conduct a Phase II ESA at the site to investigate the areas of potential concern. A summary of the Phase I ESA is provided in Section 2.0 of this SAMP. The SAMP has been prepared in accordance with the "Quality Assurance/Quality Control Plan for Conducting Investigations at Brownfields Sites", dated January 1998 (QA/QC Plan), prepared by D&B, which was reviewed and approved by the United States Environmental Protection Agency (USEPA) and the New York State Department of Environmental Conservation (NYSDEC), and with the 1999 USEPA Region 2 guidance document entitled "Generic Brownfields Quality Assurance Project Plan" (USEPA QAPP). In general, the two documents are similar. Where differences exist between them, the more stringent procedures or requirements will be used during this investigation as described in the sections below.

1.2 Project Scope and Objective

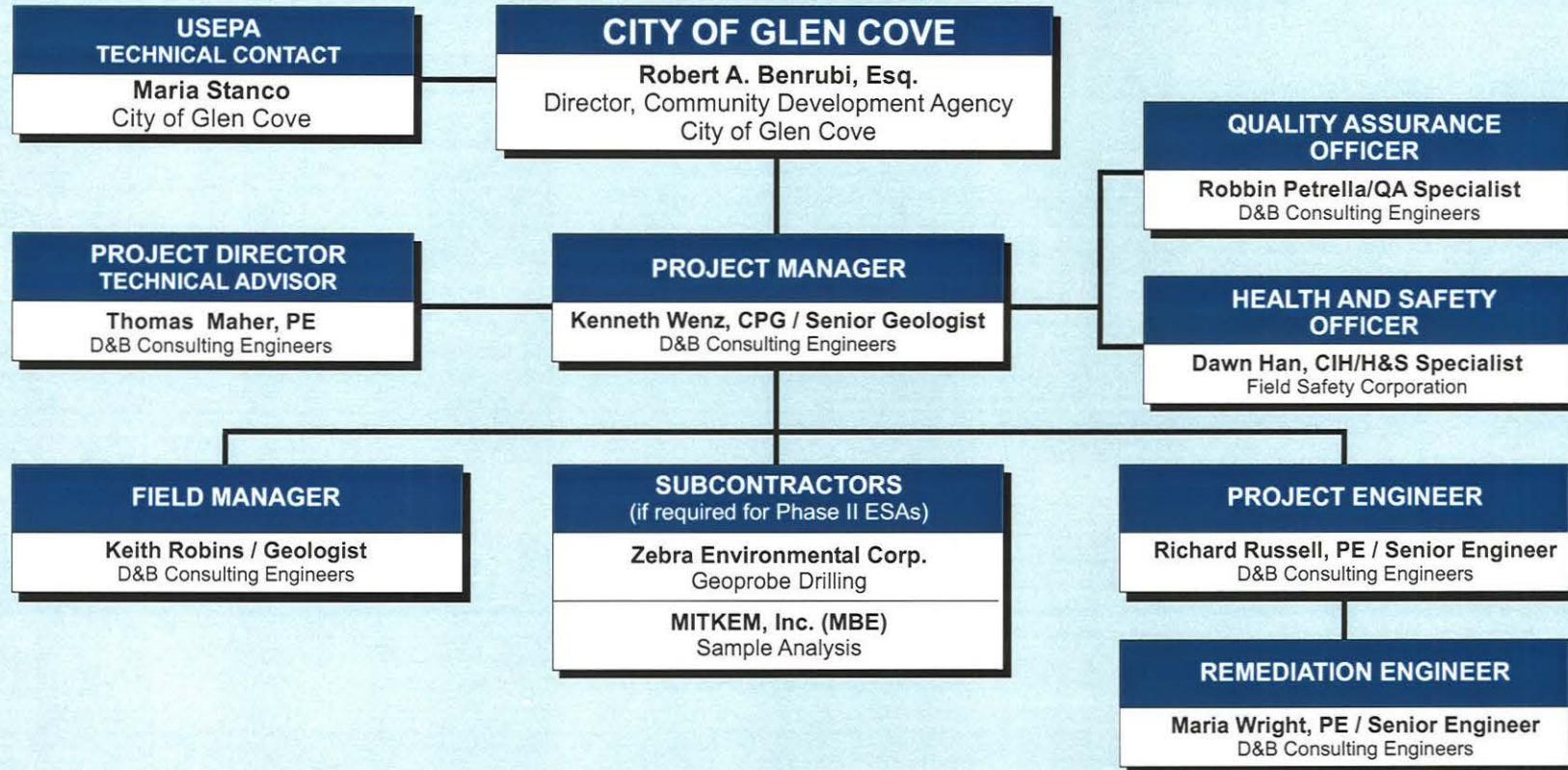
The objective of the Phase II ESA is to investigate the identified areas of potential environmental concern through collection and analysis of soil and groundwater samples in support of a potential purchase and redevelopment of the property by the City of Glen Cove. This SAMP describes the sample locations and procedures, sample media, and analytical parameters and procedures to be used during the Phase II ESA at the Doxey's Property. Section

2.0 (Areas of Potential Environmental Concern and Proposed Sampling Program) provides a summary of the areas of potential environmental concern identified during the Phase I ESA and outlines the sampling program proposed to address those areas.

1.3 Project Organization

The organizational chart for this Phase II ESA is shown on Figure 1-1.

BROWNFIELDS SITE INVESTIGATIONS IN THE CITY OF GLEN COVE



PROJECT ORGANIZATION CHART

2.0 AREAS OF POTENTIAL ENVIRONMENTAL CONCERN AND PROPOSED SAMPLING PROGRAM

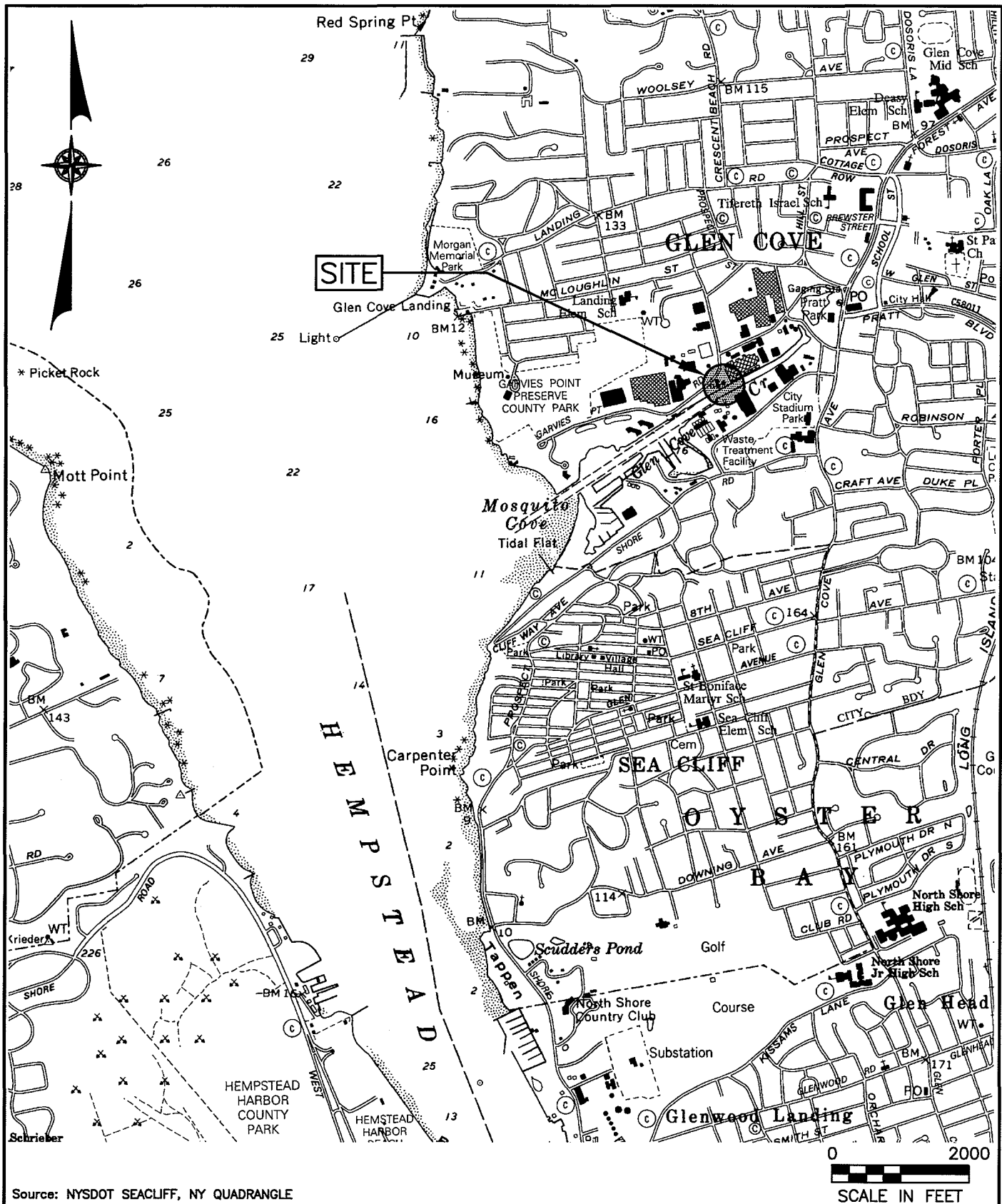
2.1 Site Description

The Doxey's Property is located in the City of Glen Cove, New York, within the Glen Cove Creek Waterfront Redevelopment District. Surrounding land use is primarily commercial and industrial. According to information obtained from the City of Glen Cove Tax Assessor's Office, the property is currently zoned as Industrial I-3 and is owned by the Garvies Point Road Corporation. The property location is shown on Figure 2-1.

The current reported use of the property is as a junkyard. Historically, property use has been petroleum storage and distribution facilities dating from before 1944 until as late as 1992, when storage of roll-off containers is apparent. The site layout as determined from tax maps and aerial photographs is shown on Figure 2-2. Inability to obtain access to the property prevented performance of a site inspection prior to preparation of this SAMP. Confirmation of the current site use and identification of areas of potential environmental concern associated with current site operations will be performed during the site inspection, which will be performed immediately prior to initiation of the Phase II ESA field program.

2.2 Areas of Potential Environmental Concern

The Phase I ESA identified several areas of the property that are of potential environmental concern. Each of these areas is discussed in detail below. The areas of potential concern whose locations could be determined as a result of the Phase I ESA, exclusive of the site inspection, are shown on Figure 2-3. These include the current and former locations of aboveground storage tanks (ASTs), loading rack, and the areas of apparent debris and pooled liquid that were evident on several aerial photographs. As noted on Figure 2-3, the areas of potential environmental concern, whose exact locations were not determined, include the underground storage tanks (USTs) reported to be present at the site, areas potentially impacted by current site operations and the storm water system at the property. In addition, a site

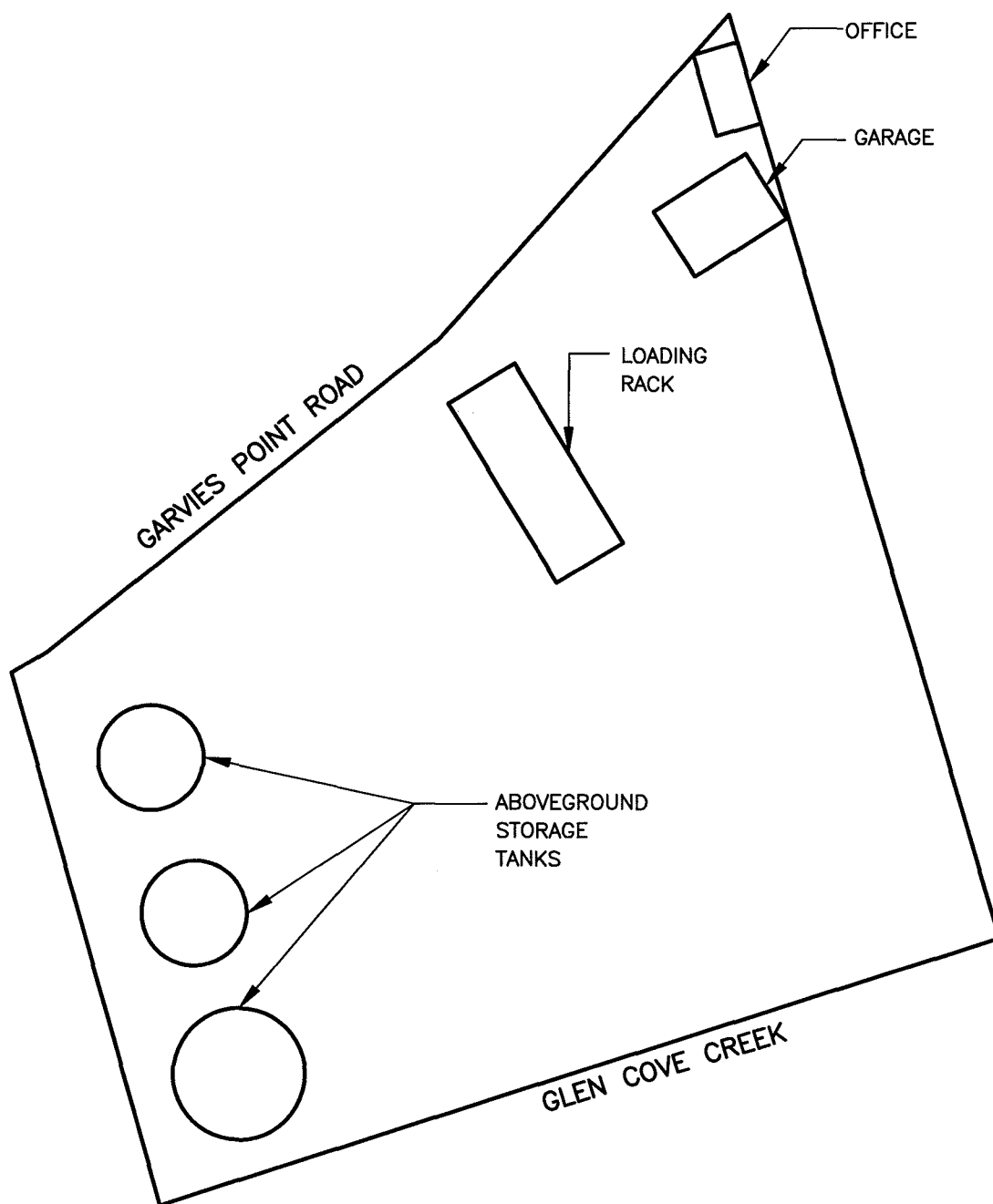


DOXEY'S PROPERTY
 PHASE II ENVIRONMENTAL SITE ASSESSMENT
 SITE LOCATION MAP



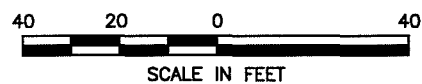
Dvirka and Bartilucci
 Consulting Engineers
 A Division of William F. Cosulich Associates, P.C.

FIGURE 2-1



NOTE:
LOCATIONS APPROXIMATE

Source: APRIL 18, 1996 AERIAL PHOTOGRAPH AND NASSAU COUNTY LAND AND TAX MAP



DOXEY'S PROPERTY
PHASE II ENVIRONMENTAL SITE ASSESSMENT

SITE PLAN



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FIGURE 2-2



SAMPLE LOCATIONS TO BE IDENTIFIED
PENDING RESULTS OF SITE INSPECTION

- 1 SUBSURFACE SOIL SAMPLE AND 1 GROUNDWATER SAMPLE AT UNDERGROUND STORAGE TANKS LOCATION
- 2 SURFACE SOIL SAMPLES AT AREAS IDENTIFIED DURING THE SITE INSPECTION
- 2 SOURCE SAMPLES AT STORM DRAINS/DRYWELLS, ETC.

ANTICIPATED
GROUNDWATER
FLOW DIRECTION



OFFICE

GARAGE

LOADING
RACK

GARVIES POINT ROAD

BERM
(1962-1992)

POOLED LIQUID
OR RUNOFF
(1978)

ABOVEGROUND
STORAGE
TANKS

FORMER LOCATION OF
ABOVEGROUND
STORAGE TANK
(1944-1992)

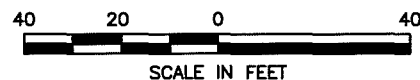
APPARENT DEBRIS
(1984)

GLEN COVE CREEK

APPARENT DEBRIS
(1996)

- HISTORIC AREAS OF POTENTIAL ENVIRONMENTAL CONCERN
- SURFACE SOIL SAMPLE LOCATION
- SUBSURFACE SOIL SAMPLE LOCATION
- + GROUNDWATER SAMPLE LOCATION

NOTE:
LOCATIONS APPROXIMATE



Source: APRIL 18, 1996 AERIAL PHOTOGRAPH AND NASSAU COUNTY LAND AND TAX MAP

DOXEY'S PROPERTY
PHASE II ENVIRONMENTAL SITE ASSESSMENT
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN AND
PROPOSED SAMPLE LOCATIONS



Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 2-3

investigation performed at the adjacent property to the west detected asbestos-containing building materials in an undelineated area along the bulkhead with Glen Cove Creek. Since it is possible that fill was also placed at the Doxey's Property, asbestos-containing material is also a potential concern.

Tax records indicate that two ASTs with capacities of 250,000 gallons and 110,000 gallons existed at the property prior to 1944. A third AST of 110,000 gallons and a loading rack were reportedly added in 1947. These tanks were originally configured in an L-shaped pattern in the southwest portion of the site (see Figure 2-3). The ASTs were realigned into the current linear configuration between 1992 and 1996, apparently after use of the site for petroleum storage and distribution ended.

Review of the environmental database search report for the property showed that four USTs were present at the site. Three of these tanks reportedly contained diesel fuel, with capacities of 4,000 gallons, 1,000 gallons and 550 gallons. The fourth UST was reportedly 4,000 gallons in size and contained unleaded gasoline. The UST locations were not identified during the Phase I ESA.

Site inspection reports from the City of Glen Cove Building Department (GCBD) and the Nassau County Fire Commission (NCFC) dated as early as 1971 note violations of the Nassau County Fire Prevention Ordinance at the property. These violations included "oil-saturated ground around the pump house and loading dock", as well as inadequate capacity at the catch basin at the site bulkhead. The specific locations of these areas were not identified. A subsequent letter from the NCFC to the GCBD indicated that all violations had been corrected, but the remedial actions taken to correct the violations were not described.

Two other potential environmental concerns related to historic site operations were also identified during the Phase I ESA. These are two NYSDEC Spill Numbers that were opened for the property, one related to equipment failure and the other due to a leaking UST. The locations of these incidents were not identified. Both Spill Numbers are reported as closed, which

indicates that the NYSDEC has ended its investigation and any remediation performed has been completed to the satisfaction of the NYSDEC.

Review of historic aerial photographs identified several areas of potential environmental concern at the property. An area of ponded liquid or run-off was visible in a 1978 photograph and two stockpiles of apparent debris were noted in photographs from 1984 and 1996. In 1984, a small area of apparent debris was evident in the southeast portion of the property. The 1996 stockpile was larger and located in the south-central portion of the site, as shown on Figure 2-3.

Additional areas of potential environmental concern include the site's storm water collection and discharge system, which will be evaluated during the site inspection, and the possible presence of asbestos-containing fill material at the property. Samples collected from along the Glen Cove Creek bulkhead at the adjacent property to the west contained asbestos at levels up to 30%. The extent of the asbestos contamination was not delineated.

2.3 Proposed Sampling Program

In order to evaluate the identified areas of potential concern described above, it is proposed that six (6) surface soil, six (6) subsurface soil, two (2) source samples and six (6) groundwater samples be collected for laboratory analysis. The proposed sample locations are shown on Figure 2-3 and discussed below. It should be noted that the sample locations shown on Figure 2-3 are approximate and may be relocated based on the results of the site inspection.

One groundwater sample will be collected as near to the northern (presumed upgradient) property boundary as possible. This location will provide an evaluation of groundwater quality entering the property.

The current and former locations of the ASTs at the property will be investigated by collection of three subsurface soil samples and two groundwater samples. The samples collected from one of these locations will also provide data to evaluate downgradient groundwater quality and may also be located to evaluate soil quality in the vicinity of the Glen Cove Creek bulkhead.

An additional subsurface soil and groundwater sample location will be along the Glen Cove Creek bulkhead to evaluate possible fill or spills in that area as well as downgradient groundwater quality.

One surface soil sample, one subsurface soil sample and one groundwater sample will be collected from the area of the loading rack, to evaluate potential impacts from historic site operations. The USTs identified at the property will be investigated by one subsurface soil sample and one groundwater sample. These samples will be collected from a location determined based on the results of the site inspection.

Surface soil samples will be collected from the two areas of apparent debris that were identified on historic aerial photographs. One additional surface soil sample will be collected from the area of pooled liquid on the 1978 aerial photograph. The remaining two surface soil sample locations will be selected based on the results of the site inspection. It is expected that these samples will target the location of former fuel dispensers and areas potentially impacted by the current reported use of the property as a junkyard.

Six soil samples will also be analyzed for asbestos. The specific samples to be analyzed will be determined based on field conditions, but at a minimum surface and subsurface soil samples collected from the vicinity of the Glen Cove Creek bulkhead will undergo asbestos analysis.

The two source samples will be soil or sediment collected at locations identified during the site inspection. It is expected that these samples will target the storm water collection and discharge system, including storm drains or drywells that may exist at the property.

A summary of the samples to be collected and the analytical methods to be used is provided in Table 2-1.

Table 2-1

**DOXEY'S PROPERTY
SUMMARY OF MONITORING PARAMETERS**

<u>Sample Location</u>	<u>Sample Type</u>	<u>Sample Matrix</u>	<u>Sample Fraction</u>	<u>Number of Samples</u>	<u>Container Type/Size/No.</u>	<u>Sample Preservation</u>	<u>Maximum Holding Time*</u>	<u>Analytical Method</u>
Probe Location	Grab	Groundwater	Volatile Organics	6	Glass, clear/ 40 mL/3 ICHM 300 series or equivalent	Cool to 4°C	7 days after VTSR for analysis	1995 NYSDEC ASP, Method 95-1
	Grab	Groundwater	Base Neutral and Acid Extractable Organics	6	Glass, amber/ 1L/2 ICHM 300 series or equivalent	Cool to 4°C	7 days after VTSR for extraction, 40 days after extraction for analysis	1995 NYSDEC ASP, Method 95-2
	Grab	Groundwater	Pesticides/PCBs	6	Glass, amber/ 1L/2 ICHM 300 series or equivalent	Cool to 4°C	7 days after VTSR for extraction, 40 days after extraction for analysis	1995 NYSDEC ASP, Method 95-3
	Grab	Groundwater	Metals (Total and Dissolved)	6	Plastic/1L/1 ICHM 300 series or equivalent	HNO ₃ to pH <2 Cool to 4°C	28 days after VTSR for Hg analysis, 6 months after VTSR for analysis of others	1995 NYSDEC ASP, Method 200.7**
	Grab	Groundwater	Cyanide	6	Plastic/1L/1 ICHM 300 series or equivalent	NaOH to pH >12 Cool to 4°C	14 days after VTSR for analysis	1995 NYSDEC ASP, Method 335.2

VTSR – Verified Time of Sample Receipt at the laboratory

* Holding times based on the NYSDEC 12/95 ASP

** If Trace ICP is not used then SW-846 Methods for:

<u>Metal</u>	<u>Method</u>
Selenium	7740
Lead	7421
Thallium	7841
Mercury	7470
Arsenic	7060

Table 2-1 (continued)

**DOXEY'S PROPERTY
SUMMARY OF MONITORING PARAMETERS**

<u>Sample Location</u>	<u>Sample Type</u>	<u>Sample Matrix</u>	<u>Sample Fraction</u>	<u>Number of Samples</u>	<u>Container Type/Size/No.</u>	<u>Sample Preservation</u>	<u>Maximum Holding Time*</u>	<u>Analytical Method</u>
On-Site	Grab	Surface Soil	Volatile Organics	6	Glass, clear/ 40 mL/2 ICHEM 200 series or equivalent	Cool to 4°C	10 days after VTSR for analysis	1995 NYSDEC ASP, Method 95-1
	Grab	Surface Soil	Base Neutral and Acid Extractable Organics	6	Glass, amber/ 150 mL/1 ICHEM 200 series or equivalent	Cool to 4°C	7 days after VTSR for extraction, 40 days after extraction for analysis	1995 NYSDEC ASP, Method 95-2
	Grab	Surface Soil	Pesticides/PCBs	6	Glass, amber/ 150 mL/1 ICHEM 200 series or equivalent	Cool to 4°C	7 days after VTSR for extraction, 40 days after extraction for analysis	1995 NYSDEC ASP, Method 95-3
	Grab	Surface Soil	Metals	6	Glass, amber/ 150 mL/1 ICHEM 200 series or equivalent	Cool to 4°C	28 days after VTSR for Hg analysis, 6 months after VTSR for analysis of others	1995 NYSDEC ASP, Method 200.7**
	Grab	Surface Soil	Cyanide	6	Glass, amber/ 150 mL/1 ICHEM 200 series or equivalent	Cool to 4°C	14 days after VTSR for analysis	1995 NYSDEC ASP, Method 335.2

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Thallium	7841
Mercury	7470
Arsenic	7060

Table 2-1 (continued)

**DOXEY'S PROPERTY
SUMMARY OF MONITORING PARAMETERS**

<u>Sample Location</u>	<u>Sample Type</u>	<u>Sample Matrix</u>	<u>Sample Fraction</u>	<u>Number of Samples</u>	<u>Container Type/Size/No.</u>	<u>Sample Preservation</u>	<u>Maximum Holding Time*</u>	<u>Analytical Method</u>
Probe Locations	Grab	Subsurface Soil	Volatile Organics	6	Glass, clear/40 mL/2 ICHM 200 series or equivalent	Cool to 4°C	10 days after VTSR for analysis	1995 NYSDEC ASP, Method 95-1
	Grab	Subsurface Soil	Base neutral and Acid Extractable Organics	6	Glass, amber/150 mL/1 ICHM 200 series or equivalent	Cool to 4°C	7 days after VTSR for extraction, 40 days after extraction for analysis	1995 NYSDEC ASP, Method 95-2
	Grab	Subsurface Soil	Pesticides/PCBs	6	Glass, amber/150 mL/1 ICHM 200 series or equivalent	Cool to 4°C	7 days after VTSR for extraction, 40 days after extraction for analysis	1995 NYSDEC ASP, Method 95-3
	Grab	Subsurface Soil	Metals	6	Glass, amber/150 mL/1 ICHM 200 series or equivalent	Cool to 4°C	28 days after VTSR for Hg analysis, 6 months after VTSR for analysis of others	1995 NYSDEC ASP, Method 200.7**
	Grab	Subsurface Soil	Cyanide	6	Glass, amber/150 mL/1 ICHM 200 series or equivalent	Cool to 4°C	14 days after VTSR for analysis	1995 NYSDEC ASP, Method 335.2

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Table 2-1 (continued)

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SUMMARY OF MONITORING PARAMETERS**

<u>Sample Location</u>	<u>Sample Type</u>	<u>Sample Matrix</u>	<u>Sample Fraction</u>	<u>Number of Samples</u>	<u>Container Type/Size/No.</u>	<u>Sample Preservation</u>	<u>Maximum Holding Time*</u>	<u>Analytical Method</u>
Dry Wells, Storm Drainage Systems and Wastewater Disposal/Sanitary Systems (Source Areas)	Grab	Sediment/Sludge	Volatile Organics	2	Glass, clear/40 mL/2 ICHM 200 series or equivalent	Cool to 4°C	10 days after VTSR for analysis	1995 NYSDEC ASP, Method 95-1
	Grab	Sediment/Sludge	Base Neutral and Acid Extractable Organics	2	Glass, amber/150 mL/1 ICHM 200 series or equivalent	Cool to 4°C	7 days after VTSR for extraction, 40 days after extraction for analysis	1995 NYSDEC ASP, Method 95-2
	Grab	Sediment/Sludge	Pesticides/PCBs	2	Glass, amber/150 mL/1 ICHM 200 series or equivalent	Cool to 4°C	7 days after VTSR for extraction, 40 days after extraction for analysis	1995 NYSDEC ASP, Method 95-3
	Grab	Sediment/Sludge	Metals	2	Glass, amber/150 mL/1 ICHM 200 series or equivalent	Cool to 4°C	28 days after VTSR for Hg analysis, 6 months after VTSR for analysis of others	1995 NYSDEC ASP, Method 200.7**
	Grab	Sediment/Sludge	Cyanide	2	Glass, amber/ ICHM 200 series or equivalent	Cool to 4°C	14 days after VTSR for analysis	1995 NYSDEC ASP, Method 335.2

VTSR – Verified Time of Sample Receipt at the laboratory

* Holding times based on the NYSDEC 12/95 ASP

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Table 2-1 (continued)

**DOXEY'S PROPERTY
SUMMARY OF MONITORING PARAMETERS**

<u>Sample Location</u>	<u>Sample Type</u>	<u>Sample Matrix</u>	<u>Sample Fraction</u>	<u>Number of Samples</u>	<u>Container Type/Size/No.</u>	<u>Sample Preservation</u>	<u>Maximum Holding Time</u>	<u>Analytical Method</u>
Vicinity of Glen Cove Creek bulkhead	Grab	Soil	Asbestos	6	Glass, clear/ 150 mL/1 ICHEM 200 series or equivalent	Cool to 4°C	10 days after VTSR for analysis	Polarized Light

VTSR – Verified Time of Sample Receipt at the laboratory

Table 2-1 (continued)

**DOXEY'S PROPERTY
SUMMARY OF MONITORING PARAMETERS**

<u>Sample Location</u>	<u>Sample Type</u>	<u>Sample Matrix</u>	<u>Sample Fraction</u>	<u>Number of Samples</u>	<u>Container Type/Size/No.</u>	<u>Sample Preservation</u>	<u>Maximum Holding Time</u>	<u>Analytical Method</u>
Site	Matrix Spike and Matrix Spike Duplicate	Water	Volatile Organics	1**	Glass, clear/ 40 mL/1 ICHM 300 series or equivalent	Cool to 4°C	7 days after VTSR for analysis	1995 NYSDEC ASP, Method 95-1
	Matrix Spike and Matrix Spike Duplicate	Water	Base Neutral and Acid Extractable Organics	1**	Glass, amber/1L/2 ICHM 300 series or equivalent	Cool to 4°C	7 days after VTSR for extraction, 40 days after extraction for analysis	1995 NYSDEC ASP, Method 95-2
	Matrix Spike and Matrix Spike Duplicate	Water	Pesticides/PCBs	1**	Glass, amber/1L/2 ICHM 300 series or equivalent	Cool to 4°C	7 days after VTSR for extraction, 40 days after extraction for analysis	1995 NYSDEC ASP, Method 95-3
	Matrix Spike and Matrix Spike Duplicate	Water	Metals (Total and Dissolved)	1**	Plastic/1L/1 ICHM 300 series or equivalent	Cool to 4°C HNO ₃ to pH <2	28 days after VTSR for Hg analysis, 6 months after VTSR for analysis of others	1995 NYSDEC ASP, Method 200.7**
	Matrix Spike and Matrix Spike Duplicate	Water	Cyanide	1**	Plastic/1L/1 ICHM 300 series or equivalent	NaOH to pH >12 Cool to 4°C	14 days after VTSR for analysis	1995 NYSDEC ASP, Method 335.2

VTSR – Verified Time of Sample Receipt at the laboratory

* Holding times based on the NYSDEC 12/95 ASP

** If Trace ICP is not used then SW-846 Methods for

<u>Metal</u>	<u>Method</u>
Selenium	7740
Lead	7421
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Mercury	7470
Arsenic	7060

Table 2-1 (continued)

**DOXEY'S PROPERTY
SUMMARY OF MONITORING PARAMETERS**

<u>Sample Location</u>	<u>Sample Type</u>	<u>Sample Matrix</u>	<u>Sample Fraction</u>	<u>Number of Samples*</u>	<u>Container Type/Size/No.</u>	<u>Sample Preservation</u>	<u>Maximum Holding Time**</u>	<u>Analytical Method</u>
Site	Matrix Spike and Matrix Spike Duplicate	Soil	Volatile Organics	1	Glass, clear/ 40 mL/2 ICHM 200 series or equivalent	Cool to 4°C	10 days after VTSR for analysis	1995 NYSDEC ASP, Method 95-1
	Matrix Spike and Matrix Spike Duplicate	Soil	Base Neutral and Acid Extractable Organics	1	Glass, amber/ 150 mL/1 ICHM 200 series or equivalent	Cool to 4°C	7 days after VTSR for extraction, 40 days after extraction for analysis	1995 NYSDEC ASP, Method 95-2
	Matrix Spike and Matrix Spike Duplicate	Soil	Pesticides/PCBs	1	Glass, amber/ 150 mL/1 ICHM 200 series or equivalent	Cool to 4°C	7 days after VTSR for extraction, 40 days after extraction for analysis	1995 NYSDEC ASP, Method 95-3
	Matrix Spike and Matrix Spike Duplicate	Soil	Metals	1	Glass, amber/ 150 mL/1 ICHM 200 series or equivalent	Cool to 4°C	28 days after VTSR for Hg analysis, 6 months after VTSR for analysis of others	1995 NYSDEC ASP, Method 200.7***
	Matrix Spike and Matrix Spike Duplicate	Soil	Cyanide	1	Glass, amber/ 150 mL/1 ICHM 200 series or equivalent	Cool to 4°C	14 days after VTSR for analysis	1995 NYSDEC ASP, Method 335.2

VTSR – Verified Time of Sample Receipt at the laboratory

* One set of MS/MSD based on collection of 14 soil/sediment samples

** Holding times based on the NYSDEC 12/95 ASP

*** If Trace ICP is not used then SW-846 Methods for

<u>Metal</u>	<u>Method</u>
Selenium	7740
Lead	7421
Thallium	7841
Mercury	7470
Arsenic	7060

Table 2-1 (continued)

DOXEY'S PROPERTY
SUMMARY OF MONITORING PARAMETERS

<u>Sample Location</u>	<u>Sample Type</u>	<u>Sample Matrix</u>	<u>Sample Fraction</u>	<u>Number of Samples</u>	<u>Container Type/Size/No.</u>	<u>Sample Preservation</u>	<u>Maximum Holding Time**</u>	<u>Analytical Method</u>
Probe Location	Duplicate	Groundwater	Volatile Organics	1	Glass, clear/40 mL/3 ICHM 300 series or equivalent	Cool to 4°C	7 days after VTSR for analysis	1995 NYSDEC ASP, Method 95-1
	Duplicate	Groundwater	Base Neutral and Acid Extractable Organics	1	Glass, amber/1L/2 ICHM 300 series or equivalent	Cool to 4°C	7 days after VTSR for extraction, 40 days after extraction for analysis	1995 NYSDEC ASP, Method 95-2
	Duplicate	Groundwater	Pesticides/PCBs	1	Glass, amber/1L/2 ICHM 300 series or equivalent	Cool to 4°C	7 days after VTSR for extraction, 40 days after extraction for analysis	1995 NYSDEC ASP, Method 95-3
	Duplicate	Groundwater	Metals (Total and Dissolved)	1	Plastic/1L/1 ICHM 300 series or equivalent	HNO ₃ to pH <2 Cool to 4°C	28 days after VTSR for Hg analysis, 6 months after VTSR for analysis of others	1995 NYSDEC ASP, Method 200.7**
	Duplicate	Groundwater	Cyanide	1	Plastic/1L/1 ICHM 300 series or equivalent	NaOH to pH >12 Cool to 4°C	14 days after VTSR for analysis	1995 NYSDEC ASP, Method 335.2

VTSR – Verified Time of Sample Receipt at the laboratory

*Holding times based on the NYSDEC 12/95 ASP

*** If Trace ICP is not used then SW-846 Methods for:

<u>Metal</u>	<u>Method</u>
Selenium	7740
Lead	7421
Thallium	7841
Mercury	7470
Arsenic	7060

Table 2-1 (continued)

DOXEY'S PROPERTY
SUMMARY OF MONITORING PARAMETERS

<u>Sample Location</u>	<u>Sample Type</u>	<u>Sample Matrix</u>	<u>Sample Fraction</u>	<u>Number of Samples</u>	<u>Container Type/Size/No.</u>	<u>Sample Preservation</u>	<u>Maximum Holding Time**</u>	<u>Analytical Method</u>
Probe Locations	Duplicate	Subsurface Soil	Volatile Organics	1	Glass, clear/40 mL/2 ICHM 200 series or equivalent	Cool to 4°C	10 days after VTSR for analysis	1995 NYSDEC ASP, Method 95-1
	Duplicate	Subsurface Soil	Base Neutral and Acid Extractable Organics	1	Glass, amber/150m l/1 ICHM 200 series or equivalent	Cool to 4°C	7 days after VTSR for extraction, 40 days after extraction for analysis	1995 NYSDEC ASP, Method 95-2
	Duplicate	Subsurface Soil	Pesticides/PCBs	1	Glass, amber/150 mL/1 ICHM 200 series or equivalent	Cool to 4°C	7 days after VTSR for extraction, 40 days after extraction for analysis	1995 NYSDEC ASP, Method 95-3
	Duplicate	Subsurface Soil	Metals	1	Glass, amber/150 mL/1 ICHM 200 series or equivalent	Cool to 4°C	28 days after VTSR for Hg analysis, 6 months after VTSR for analysis of others	1995 NYSDEC ASP, Method 200.7**
	Duplicate	Subsurface Soil	Cyanide	1	Glass, amber/150 mL/1 ICHM 200 series or equivalent	Cool to 4°C	14 days after VTSR for analysis	1995 NYSDEC ASP, Method 335.2

VTSR – Verified Time of Sample Receipt at the laboratory

*Holding times based on the NYSDEC 12/95 ASP

** One set of MS/MSD based on collection of 14/soil/sediment samples

*** If Trace ICP is not used then SW-846 Methods for

<u>Metal</u>	<u>Method</u>
Selenium	7740
Lead	7421
Thallium	7841
Mercury	7470
Arsenic	7060

Table 2-1 (continued)

**DOXEY'S PROPERTY
SUMMARY OF MONITORING PARAMETERS**

<u>Sample Location</u>	<u>Sample Type</u>	<u>Sample Matrix</u>	<u>Sample Fraction</u>	<u>Container Type/Size/No.</u>	<u>Sample Preservation</u>	<u>Maximum Holding Time</u>	<u>Analytical Method</u>
Site	Trip Blank	Water	Volatile Organics	Glass, clear/ 40 mL/1 ICHEM 300 series or equivalent	Cool to 4°C	7 days after VTSR for analysis	1995 NYSDEC ASP, Method 95-1

VTSR – Verified Time of Sample Receipt at the laboratory

2.4 Sample Collection

Surface soil samples will be collected using dedicated sterile polyethylene scoops. Subsurface soil, sediment and groundwater samples will be collected using a truck-mounted Geoprobe rig and dedicated samplers. Subsurface soil samples will be screened using an organic vapor analyzer equipped with a photoionization detector (PID) and geologically logged, including noted odors and staining. The worst-case interval, based on the PID readings, staining and odors, will be submitted for laboratory analysis. In cases where no worst-case interval is identified, the interval immediately above the water table will be submitted to the laboratory. All sample collection, documentation and handling will be in accordance with the procedures outlined in the 1998 QA/QC Plan and with the "Health and Safety Plan for Conducting Investigations at Brownfield Sites" which was prepared by D&B for the City of Glen Cove. Site-specific health and safety information is included in Appendix A of this report.

2.5 Sample Analysis

Surface and subsurface samples will be analyzed for Target Compound List (TCL) volatile organic compounds (VOCs), TCL semi-volatile organic compounds (SVOCs), TCL pesticides/PCBs and Target Analyte List (TAL) metals, including cyanide. Groundwater samples will be analyzed for TCL VOCs, TCL SVOCs, TCL pesticides/PCBs and total and dissolved TAL metals, including cyanide. Quality Assurance/Quality Control (QA/QC) samples to be collected include one matrix spike/matrix spike duplicate set and one blind duplicate for soil/sediment and for groundwater. In addition, a trip blank will be included with each sample shipment. The trip blank will be analyzed for TCL VOCs only. No QA/QC samples are required for those samples to be analyzed for asbestos.

Sample analysis will be performed using NYSDEC 12/95 Analytical Services Protocol (ASP) analytical methods. It is expected that accelerated laboratory turnaround (one to two weeks) will be required for these analyses. A summary of the analytical methods to be used is provided in Table 2-1. Sample analysis for all parameters except asbestos will be performed by Mitkem Laboratories of Warwick, Rhode Island. Mitkem is certified under the USEPA Contract

Laboratory Program (CLP) and the New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP) and NYSDOH CLP for these analyses. Asbestos samples will be subcontracted by Mitkem to EMSL Analytical of Westport, New Jersey. EMSL NYSDOH ELAP-certified for asbestos analysis.

Laboratory data deliverable packages will be NYSDEC ASP Category B. All data packages will be validated in accordance with the requirements of the 1998 QA/QC Plan and the 1999 USEPA QAPP. Data Quality Objectives will be in accordance with the 1998 QA/QC Plan and 1999 USEPA QAPP.

Field equipment maintenance, calibration and corrective action will be performed and documented in accordance with the 1998 QA/QC Plan and 1999 USEPA QAPP. Likewise, laboratory equipment maintenance, calibration and corrective action will be performed and documented in accordance with the 1998 QA/QC Plan and 1999 USEPA QAPP.

2.6 Report Preparation

After the analytical results have been received and validated, a Phase II ESA Report will be prepared. This report will include a description of the sampling procedures, sample locations, analytical results and data validation reports, as well as recommendations and conclusions based on the sample results and exposure assessment, including remediation, if warranted.

2.7 Project Schedule

The project schedule will be determined when site access arrangement and the laboratory turnaround time have been finalized.

APPENDIX A

SITE-SPECIFIC HEALTH AND SAFETY INFORMATION

SITE-SPECIFIC INFORMATION
Doxey's Phase II Environmental Site Assessment

The following site-specific information will be filled out by project personnel for each site and will be posted on-site:

Site Name: Doxey's Property

Address: 10 Garvies Point Road
Glen Cove, New York

Telephone: Not available

Date of HASP Preparation: June 8, 1999

Dates of Field Investigation: June 23-25, 1999 (tentative)

Entry Objectives: Site inspection and collection of environmental samples

Site Organizational Structure:	Name	Phone
Project Director:	<u>Thomas F. Maher, P.E.</u>	<u>(516) 364-9890</u>
Project Manager:	<u>Kenneth P. Wenz, C.P.G.</u>	<u>(516) 364-9890</u>
HSO:	<u>Dawn Han, Field Safety Corporation.</u>	<u>(203) 457-2100</u>
FOM/Alternate HSO:	<u>Keith Robins</u>	<u>(516) 364-9890</u>
Field Team Staff:	<u></u>	<u></u>
	<u></u>	<u></u>
	<u></u>	<u></u>
	<u></u>	<u></u>
Subcontractors:	<u>Zebra Environmental Corp..</u>	<u>(516) 371-2020</u>
	<u></u>	<u></u>

SITE-SPECIFIC INFORMATION (continued)
Doxey's Phase II Environmental Site Assessment

Medical Assistance

Physician: Dr. Ronald Rosen

Address: 410 Lakeville Road, Suite 105.
New Hyde Park, New York 11042

Telephone: (516) 437-9184

Hospital: North Shore University Hospital at Glen Cove

Address: St. Andrews Lane
Glen Cove, New York

Emergency Telephone: (516) 674-7306

Directions: Take Garvies Point Road east to Herhill Road. Turn right onto
Herhill Road and proceed to Charles Street. Turn right on
Charles Street and proceed to the first traffic light. Turn left onto
Glen Cove Avenue, proceed to Forest Avenue and turn right.
Follow Forest Avenue to Walnut Avenue, turn right and proceed 1
block. Turn right onto St. Andrews Lane, then left into Emergency
Room.

Please attach a route to hospital

Emergency Telephones

Agent/Facility	Telephone	Emergency Number
EMS – Ambulance	(516) 676-1000	(516) 676-1000
Police Department	(516) 676-1000	(516) 676-1000
Fire Department	(516) 676-0366	(516) 671-3437
Hospital	(516) 674-7300	(516) 674-7306
Poison Control Center	(516) 542-2323	(516) 542-2323

SITE-SPECIFIC INFORMATION (continued)
Doxey's Phase II Environmental Site Assessment

Additional site-related information (may include special hazards, site control, waste storage and disposal, PPE, decontamination area location, special engineering controls, etc.).

(To be determined)
